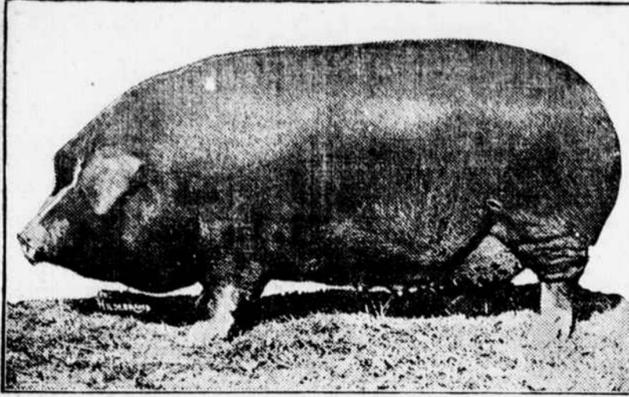


MANAGEMENT OF SOW DURING FARROWING



Champion Poland China Sow.

(Prepared by the United States Department of Agriculture.)

Nearly four million acres in the United States, it is estimated, have been devastated by soil erosion, and a vastly larger area has lost much of its fertility. Nowhere is soil erosion more serious than in the South. The climate, the character of the soil, the economic conditions, and the type of agriculture, which has hitherto prevailed, have all contributed to the damage, yet with the exception of the amount of rainfall every factor in erosion can be controlled by man.

Soil erosion is the carrying away of the soil by the action of wind or water. In the South the action of water is much the more important. If all the water that falls upon a given area were to be absorbed by the soil, it would cause no erosion. This, however, scarcely ever happens. Where the slope of the ground or the character of the soil is such that the water runs off rapidly, it carries with it a very appreciable quantity of soil particles, the quantity increasing as the speed of the running water increases. Where this erosion is excessive the soil is left bare and gullied. The land is hard to cultivate and so much organic matter is taken from it that it is frequently abandoned as too poor for profitable agriculture.

To check this process, terracing, deep plowing and the use of cover crops are advantageous. Vegetation not only hinders the flow of water over the surface, thus lessening the amount of erosion, but the roots striking through the soil loosen it and enable it to absorb the water more readily. In the South the use of cover crops for this purpose is particularly important because so much of the rainfall in this section is in the winter when the land is frequently bare of crops. Winter rye is particularly advantageous in holding the soil. The value of deep plowing lies in the fact that this loosens the soil for a considerable distance below the surface and thus enables the water to be absorbed quickly. Terracing obviously is designed to provide level areas for the water to fall on instead of steep hillsides down which it can rush.

The importance of measures that will check erosion is indicated by the fact that in some southern states vast areas amounting sometimes to 50 per cent of the arable land in these sections have been abandoned because



A Choice Lot of Spring Lambs in Tennessee.

the water has carried off much of the best soil and impaired the value of what has been left. On moderate slopes in the Piedmont region of North Carolina erosion has been estimated to cause a yearly loss in crop values alone of three dollars an acre, making the total loss in this region over two million dollars each year. On the other hand, there are many hilly farms in which excessive erosion is effectively prevented. Farmers who wish detailed information of the best methods of terracing and other means of control, should write to the United States department of agriculture for Farmers' Bulletin No. 20, Circular No. 94 of the Bureau of Plant Industry or U. S. Department of Agriculture Bulletin No. 180.

When land has once been badly eroded the task of reclaiming it is apt to be difficult and long. It can be done, however, and at times may be made very profitable. An instance of this is a tract of 38 acres near Johnson City, Tenn., which was purchased four years ago for \$53 an acre. At that time the land was badly eroded and there was one gully eight or ten feet deep. This the new owner filled with debris and soil, 200 loads of manure were applied, and the soil was plowed to a depth of ten inches, planted to rye and the rye turned under. The deep plowing and the organic matter in the rye left the soil in such

condition that practically all the water which fell on it was absorbed. As a result the land increased in value so that the owner declined \$100 an acre for it. The cost of reclamation was approximately \$10 an acre. It is simpler, however, to prevent excessive erosion than to reclaim land after it has occurred.

Locations for Creameries.

In developing the dairy industry throughout the South a very important matter is the selection of the locations in which to erect creameries. No one would build a sawmill where there is little or no timber suitable to be made into lumber, and it would be equally unwise to start a creamery where the supply of milk and cream is insufficient for economical operation of the plant. In many dairy regions creameries have been operated successfully and have brought prosperity to the community. On the other hand, there are many closed creameries in the United States and many farmers who have lost money by unwise investments in them.

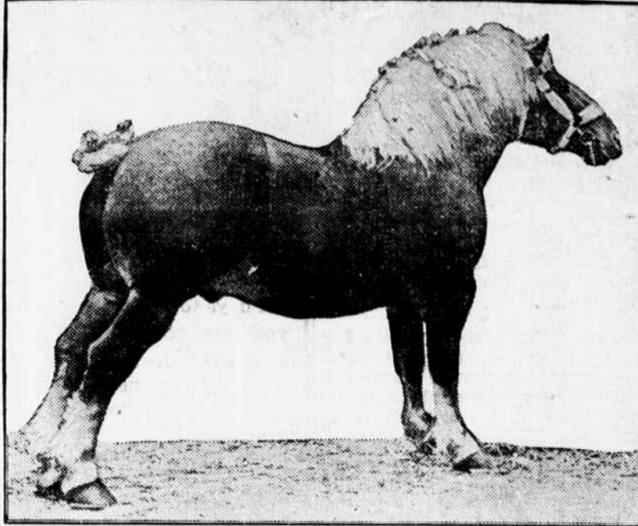
The first essential for the success of a creamery is a sufficient supply of milk and cream. An insufficient supply means a loss for all concerned. The number of available cows in a community is frequently overestimated. About six hundred southern cows should provide raw material enough, and if this is sent to the creamery in the form of whole milk the cows should all be within five miles of the creamery.

In order to keep expenses reasonably low, an average of at least 1,200 pounds of butter must be made each week, which will require about one thousand pounds of butter fat. The smaller the output the greater the cost per pound of butter, for some of the expenses will remain approximately the same whether the daily output is one hundred or two hundred pounds.

If a careful canvass reveals the fact that, excluding those required to meet the demands of home consumption, the necessary cows are available, the information should be sent to either the state agricultural college or the Dairy Division, Department of Agriculture, Washington, D. C., with a request for plans and advice for the organization, building and equipment of a plant that will be likely to succeed under existing local conditions.

Next to an insufficient supply of milk, one of the most frequent causes

HORSES AND MULES IN THE COTTON BELT



Champion Belgian Stallion.

(Prepared by the U. S. Department of Agriculture.)

The destruction of horses in the countries now at war is enormous, and when peace is declared and for many years thereafter there will no doubt be a great demand for horses for agricultural and other work. The farmer who has surplus horses at that time will be in a position to obtain good prices.

The United States department of agriculture has recently distributed throughout the cotton belt information regarding horse and mule raising in the South, which should be of use to cotton growers whose crop has been affected by the present crisis, and who now wish to diversify their farming because of this. These farmers are advised particularly to keep their best mares to work on the farm and raise colts at the same time. They will then be able to raise horses for their own work as well as to take advantage of the home and foreign markets.

Many brood mares are overworked, while many others are kept too closely confined. The mare may be safely worked to within two weeks of foaling if good care is used to see that she is not overworked or injured in some other way. It is not unusual for mares which have been worked to the date of foaling to foal successfully. It



Two-Year-Old Mule Colt.

is safer, however, gradually to diminish the work so that during the last few weeks only the lightest kind of work is done.

If pasture is available, the mare may be turned out about two weeks before foaling. If pasture is not available, she should be given a good roomy box stall. There need be no radical change in the feed, except that the ration of the mare should be lightened shortly before foaling and made more laxative. For this purpose an addition of bran and a decrease of the grain feeds is very satisfactory.

When the mare is again put to work the foal may either be left in the stable or allowed to follow. If left in the stable, it will be necessary to return the mare in the middle of the forenoon and likewise in the afternoon for the colt to suck. Never allow the foal to suck when the mare is very warm, for the milk at that time is quite apt to cause digestive disorders in the colt. The foal should be allowed access to the dam's grain in order that it may learn to eat as soon as possible. The foal may be weaned at six months of age, and if it has previously been eating grain, no great setback will occur. The mare can usually be bred with greater certainty of success on the ninth day after foaling than at any subsequent date.

Care of the Foal After Weaning.

As exercise is of prime importance for the proper development of young animals the foal should have pasture or a paddock in which to exercise. Access to a barn or shed should be provided as a protection against storms.

The feed of the foal may be similar to that which the mare was receiving before the foal was weaned. The weaned foal should have two to three pounds of grain per day and what hay it will eat. A grain mixture consisting of two parts of ground oats, two parts of corn meal and one part of wheat bran, by weight, may be fed. If oats and bran are not available a mixture consisting of seven parts corn meal and one part cottonseed meal may be substituted. All of the legu-

minous hays, if of a good quality, such as alfalfa clover, and cowpea hay, are good for the foal. As the foal becomes older a more liberal grain ration should be provided. A yearling foal, to grow properly, will need four or five pounds of grain per day in addition to what hay will be eaten.

There is no single factor in agricultural production on the average farm that is of greater importance than good horse or mule power. This power can usually be furnished more cheaply by the production of needed animals in that particular locality than by purchasing them from remote localities. In home production there is also the added advantage of possessing animals which are thoroughly acclimatized. Therefore if you are the owner of a good mare do not fail to breed her either to a good stallion or a good jack.

If the mare is of the light type, breed her to a good stallion of one of the light breeds; and if of a draft type, breed her to a draft stallion. The progeny of a light mare bred to a draft stallion is usually a nondescript that is not fitted to any particular field and will not command the price of either a high-class light or a high-class draft horse. By the light type is meant horses of the Standardbred, Thoroughbred, American Saddle, and similar breeds; by the draft type is meant horses of the Percheron, Belgian, Shire, Clydesdale and similar breeds. In breeding to a jack, mares of almost any kind may be used if sound, the best mules, as a rule, being produced from the mares with the most weight and finish. The production of inferior animals of any kind is seldom profitable.

The department of agriculture, Washington, D. C., will send free of charge, to anyone who applies, the following bulletins:

No. 170. Principles of Horse Feeding.

No. 619. Breeds of Draft Horses.

WATER GLASS AND ITS USE

Solution of Sodium Silicate is Excellent for Preservation of Eggs—Liquid Form Best.

(By CHARLES E. FRANCIS, Oklahoma Experiment Station.)

The chemical name for water glass is sodium silicate or silicate of soda. It may be obtained in a granular or powdered form and as it is somewhat difficult to get into solution I would advise the liquid form which may be obtained for about fifty cents a gallon.

This is a strong solution, 40-42 degrees, about the consistency of molasses.

The following formula may be used for preserving eggs: Ten quarts of water which has been boiled and cooled add one pint of water glass and stir thoroughly.

Place the solution in a jar or tub and add the fresh eggs in sufficient quantity to have at least two inches of the solution above the eggs. This quantity should be sufficient for about five dozen eggs.

Water glass may be bought from any of the large drug firms.

REDUCE THE COTTON ACREAGE

Everybody Should Raise All the Hay, Corn, Forage Crops and Garden Truck Needed by Family.

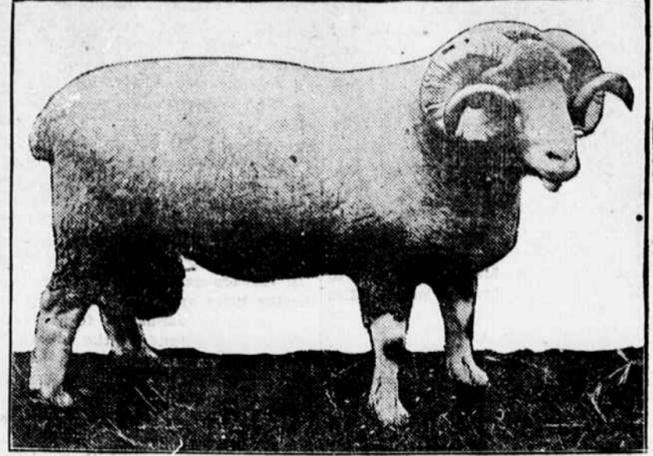
There is one easy, simple and effective way to reduce the cotton acreage—everybody plant enough land to raise all their hay, corn, forage crops and garden truck. Keep enough chickens and hogs to supply the table with eggs and meat, also raise and fatten one or more beef animals. With a few or many acres devoted to these crops there will be less acres to plant in cotton and less need of it, for the family living is largely provided for.

There will be several million bales of cotton to carry over, and if the usual acreage is planted the price of cotton will continue low and the cost of living high. Let the South raise her own food supplies and the cotton problem will be solved.

Select Good Seed.

Twelve ears of corn will plant an acre. If one of the planted ears be "no good," there is a twelfth of an acre missing.

SHEEP HAVE IMPORTANT PLACE IN SOUTH



First Prize Yearling Dorset Ram.

(Prepared by the U. S. Department of Agriculture.)

Most farmers have, at some time or another, given some thought to the question of raising cattle and hogs. Sheep, however, are a less familiar idea to many. Nevertheless, sheep have an important place on southern farms. By keeping a flock of six to twelve ewes, the farmer can provide himself with meat for the table, have a few lambs for the market and secure additional revenue through the sale of wool.

Southern farmers who would like to get a start raising sheep may obtain interesting information from certain bulletins which may be had free of charge of the United States department of agriculture, Washington, D. C. The following may be applied for:

Farmers' Bulletin 576—"Breeds of Sheep for the Farm."

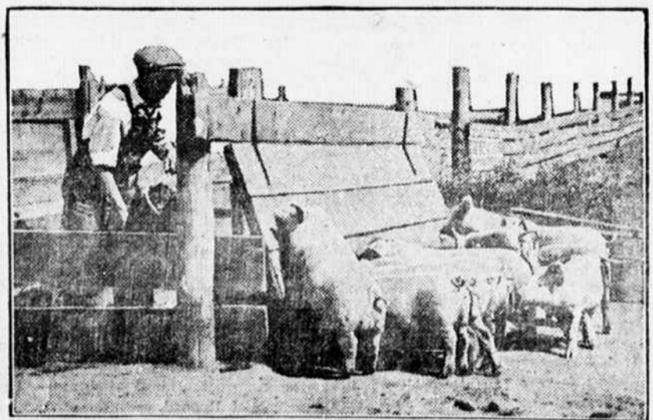
Farmers' Bulletin 599—"Forage Crops for the Cotton Region."

The first ewes can be native ewes, purchased from nearby sheep owners. Go into a flock and pick out vigorous ewes with compact bodies. Get young, healthy ewes. If you must buy old ones, do not take those having spread, broken or worn-off teeth. Such ewes cannot eat well and will make no money as breeders for their purchasers.

Do not use any but good rams of a mutton breed upon your ewes. A Southdown, Shropshire, Hampshire or Dorset Horn ram will prove most desirable. He should be about two years of age, healthy, and carry plenty of mutton. Such a ram will cost, delivered, from fifteen to twenty-five dollars, and can be bought by a half dozen farmers clubbed together. He will breed from forty to sixty ewes.

Sheep do not require closed buildings for protection from cold, as their fleeces do that if kept dry. A low shed built on dry ground and opening to the south, is sufficient. Such a shed need cost but very little, as scraps of lumber about the farm can be utilized in building it.

Place your flocks within a dog-proof fenced inclosure at night, as dogs often attack and destroy sheep. A fence that will turn a dog must be at least fifty inches high, have a barbed wire stretched flat to the surface of the ground at its bottom and three barbed wires seven inches apart stretched at its top. The space between the barbed wires can be filled



Feeding Device to Prevent Crowding.

in with old boards, poles or any other fence-building material, provided it is so built as to keep the dog from crawling through.

Often ewes become "taggy" or have dungy locks collect on the wool about the tail and between the hind legs. Such locks should be cut off and the ewes kept clean about this part of the body.

Ticks and lice frequently infect sheep. Guard against this by dipping once each year in dips sold for this purpose. A rain barrel or tub can be used to hold the dip. Pick the sheep up bodily and work it around gradually in the dip until all parts are submerged and drenched to the skin.

Keep salt before the flock at all times. Sheep require a great deal of salt and it is essential for them.

Give the sheep access to all harvested and vacated fields, but do not depend entirely upon such forages. The ideal way is to provide lots of forages of such size as will pasture the flocks for only two-week periods during warm weather. By changing the pasturing ground of lambs every two weeks there is little danger of loss from stomach worms, as clean pastures do not infect sheep. Rape, cow-

peas, oats, vetch, crimson clover and soy beans should constitute the principal forages used. During the fall and winter permanent pastures can be used. Even regular fields of winter wheat and barley can be pastured without injury to them.

When pasture is not available feed hay or fodder to the flock. Keep up the appetites of the ewes by adding small quantities of rape, collards, chopped cabbage, or roots along with the hay. Do not feed roots to your rams or wethers.

Begin feeding the ewes a little grain about two weeks before lambing and gradually increase the amount to one-half pound daily at that time. After lambing, slowly increase the amount to one and one-half to two pounds daily, and continue this ration during the suckling period. Ewes need not be grazed when dry if good pasture is provided.

Give the ram just enough grain to keep him in good condition. The amount fed should be increased during the breeding season.

Teach the lambs to eat grain as soon as possible after birth, and continually feed them what they will eat cleanly until ready for the market. Feed them twice daily, using creepers to keep out the ewes.

The following grain ration, generally available on the farm, is suitable for sheep: Corn, two parts by weight; cottonseed meal, one part by weight.

Probably August and September are the best months for mating, as this will bring your lambs in January and February. Do not leave the ram with the ewes continually, but take the ewes to him for a few minutes each morning. Allow only one service to a ewe during each period of heat, but be certain that the ewe gets in lamb before dropping breeding operation.

Watch the ewes carefully during the lambing season, but do not interfere with them unless necessary. After lambs are born, see that they are promptly dried and suckled. Frequently ewes disown their lambs unless forced to nurse them.

Give the ewes little, if any, grain ration for two or three days after lambing. At the expiration of this time it can be gradually given her until the full ration is reached.

In small flocks the fleeces can be most economically removed by using hand shears. After the sheep is shorn remove all tags and burs from the fleece, carefully roll it up inside out,

and tie neatly with cotton or paper string. If only a few fleeces are had they can be placed in clean gunny sacks and sold to local dealers. If there is a woolen mill in your vicinity perhaps it will make your wool into cloth for you.

Now let us summarize the returns to be expected from six head of properly handled ewes. Such a summary will appear thus:

1. Four fat lambs ready for the table or market and weighing from 70 to 85 pounds when three and one-half or four months of age.
2. Two ewe lambs to remain in the flock.
3. One old ewe, culled for the butcher.
4. Six fleeces, giving 40 pounds of wool.
5. Increased valuation in flock due to improved breeding.
6. Increased fertility of soil due to forage crops and manure produced.
7. A new source of income provided for the farm.

Let the Flock Run.

The flock should be given the chance to run in the open yard on all fine days.